

Appl. No.: 10/738,479
Amvl. dated 01/26/2005
Reply to Office action of August 17, 2004

REMARKS/ARGUMENTS

In view of the following remarks, reexamination and reconsideration of this application, withdrawal of the rejections, and formal notification of the allowability of all claims as presented are earnestly solicited. As detailed in the Office Action mailed August 17, 2004, Claims 1-27 are pending and have been rejected. In response to the Office Action, Claims 1-3 and 11 have been amended. The amendment to the claims find support throughout the Specification and the Drawings and no new matter has been added. Accordingly, it is believed that the claims now define patentable subject matter over the prior art cited in the Office Action and notice to such effect is requested at the Examiner's earliest convenience.

Claim Rejections – 35 U.S.C. §102

Claims 1-4, 9-12, 16, 23, 26, and 27 were rejected in the Office Action as being anticipated by European Patent Application No. EP 1 143 067 A2 to Pellinen. In addition, Claims 1, 2, 4, 5, 7-9, 11, 12, 16, 17, and 19-26 were rejected as being anticipated by International Patent Application WO 99/51813 to Veijola *et al.*

In response, the Applicants note that the Pellinen EP 1 143 067 A2 reference was published on October 10, 2001. In addition, the Finnish application to which the EP 1 143 067 A2 reference claims priority, e.g., FI 20000816 (filed June 4, 2000), was published on October 7, 2001. In this regard, the Applicants submit that the present invention was filed as a continuation of International Patent Application No. PCT/FI02/00556, filed June 25, 2002, and claims priority to Finnish Patent Application No. 20011363, filed June 26, 2001. The Applicants further note that the priority claim to Finnish Patent Application No. 20011363 has already been asserted by the Applicants and recognized in this matter. Accordingly, the Applicants submit that the Pellinen EP 1 143 067 A2 reference, published on October 10, 2001, DOES NOT constitute prior art with respect to the present application, which claims priority to Finnish Patent Application No. 20011363, filed June 26, 2001. Accordingly, the Applicants request withdrawal of the rejections of Claims 1-4, 9-12, 16, 23, 26, and 27 as being anticipated by the Pellinen EP 1 143 067 A2 reference.

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With respect to the rejection of Claims 1, 2, 4, 5, 7-9, 11, 12, 16, 17, and 19-26 as being anticipated by the Veijola WO 99/51813 reference, Claim 1, upon which Claims 2, 4, 5, and 7-9 depend either directly or indirectly, has been amended to indicate a method of blowing drying gas against a paper web with an impingement dryer comprising a plurality of profiling chambers, wherein each profiling chamber extends in a machine direction and the profiling chambers are adjacently disposed in the cross-direction of a paper machine. Such a method includes blowing the drying gas from the profiling chambers such that each profiling chamber blows the drying gas to its own effective area. The drying gas blown against the paper web is then collected into a return air chamber via return air ducts in communication with the return air chamber and arranged between adjacent profiling chambers so as to separate the profiling chambers. The profiling chambers and the return air ducts are further arranged in such a way that drying gas blown against the paper web from the profiling chambers is returned into the return air chamber through the return air ducts without the drying gas from one profiling chamber affecting the effective area of the adjacent profiling chamber.

Claim 11, upon which Claims 12, 16, 17, and 19-26 depend either directly or indirectly, has also been amended to indicate that an impingement dryer of a paper machine comprises a plurality of profiling chambers, wherein each profiling chamber extends in a machine direction and the profiling chambers are adjacently disposed in the cross-direction of the paper machine, and wherein each profiling chamber is arranged to blow drying gas against the paper web to its own effective area and in such a way that drying gas blown against the paper web is collected into a return air chamber through the return air ducts in communication therewith. The return air ducts are further arranged between adjacent profiling chambers so as to separate the profiling chambers, and the profiling chambers and the return air ducts are arranged in such a way that drying gas blown against the paper web from the profiling chambers is returned into the return air chamber through the return air ducts without the drying gas from one profiling chamber affecting the effective area of the adjacent profiling chamber.

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Such amendments find support throughout the Specification and the Figures such as, for example, Paragraph [0028] on Pages 7 and 8 of the Specification, and in Figures 1 and 3. As such, no new matter has been added.

In contrast, the Veijola WO 99/51813 reference discloses a method and apparatus for controlling the temperature in the drying section of a paper machine using an impingement drying system 12. The system 12 includes a pair of hoods 14, 16. As particularly shown in FIG. 2, the hood 16 (also representing the hood 14) has air supplied thereto by a blower 54, 54' from a space 52 within the hood 16, whereby the air is supplied via a heater 56, 56', an equalizing chamber 58, and control louvers 60, 60', 60", 60"". From the control louvers 60, 60', 60", 60""", the air enters the central 50, 50', 50", 50"" and border 48, 48' hood blocks, and is then supplied to the paper web through nozzle boxes 62, 62', 62", 62""", 70, 70'. A discharge air channel 74 extends in the machine cross direction (Page 14, lines 12-13) through the hood 16, so that this channel 74 removes a part of the moist drying air returning into the hood from between the cylinder and the hood. The channel 74 is mounted close to the nozzle box 62, whereby mainly moist returning air flows into the channel 74.

In this regard, the Applicants submit that the Veijola WO 99/51813 reference, particularly FIG. 2 thereof, shows the hood blocks 50, 50', 50", 50""", 48, 48' serially disposed in the machine cross direction, with each hood block 50, 50', 50", 50""", 48, 48' extending in the machine direction (perpendicularly to the machine cross direction). However, the air flowing through the hood blocks 50, 50', 50", 50""", 48, 48' then flows into one or more nozzle boxes to be blown against the paper web through nozzles associated with the nozzle box(es), where each of the nozzle boxes extends in the machine cross-direction and the nozzle boxes are serially disposed in the machine direction. Elements 62, 62', 62", 62""", 70, 70' of FIG. 2 of the Veijola WO 99/51813 reference thus represent sectors of a single nozzle box extending in the machine cross direction. Further, the Veijola WO 99/51813 reference particularly states that a discharge air channel 74 extends in the machine cross direction (Page 14, lines 12-13), and thus perpendicularly to the hood blocks 50, 50', 50", 50""", 48, 48'. Accordingly, if the "air is returned . . . via . . . slits running between the nozzle boxes directly to different blocks, so that the air can be recirculated" (Page 8, lines 4-6), the nozzle boxes referenced by the Veijola WO

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99/51813 reference must extend in the machine cross direction in order for the discharge air channel 74 to be disposed between nozzle boxes, as stated on Page 8, lines 4-6 of the Veijola WO 99/51813 reference.

Accordingly, the Veijola WO 99/51813 reference does not teach or suggest an impingement dryer of a paper machine comprising a plurality of profiling chambers, wherein each profiling chamber extends in a machine direction and the profiling chambers are adjacently disposed in the cross-direction of the paper machine, and wherein the return air ducts are arranged between adjacent profiling chambers so as to separate the profiling chambers, and wherein the profiling chambers and the return air ducts are arranged in such a way that drying gas blown against the paper web from the profiling chambers is returned into the return air chamber through the return air ducts without the drying gas from one profiling chamber affecting the effective area of the adjacent profiling chamber, as now claimed in Claims 1 and 11 of the present invention. That is, the Veijola WO 99/51813 reference discusses nozzle boxes and a discharge air channel 74 that extend in the machine cross-direction and are adjacently disposed in the machine direction, wherein such an orientation of the nozzle boxes and discharge air channel 74 is perpendicular to the arrangement disclosed and claimed in the present invention. Since the running of the web in the machine direction would affect the dispersion of the drying air discharged from the nozzles of the nozzle boxes, the configuration suggested by the Veijola WO 99/51813 reference may allow air from an upstream nozzle box to be blown into the effective area of an adjacent downstream nozzle box due to the effect of the traveling web, since the nozzle boxes are extend in the cross machine direction and are serially disposed in the machine direction.

As such, the Veijola WO 99/51813 reference does not teach or suggest an impingement drier having profiling chambers each extending in a machine direction, wherein the profiling chambers are adjacently disposed in the cross-direction of the paper machine such that return air ducts are arranged between adjacent profiling chambers separate the profiling chambers, and wherein the profiling chambers and the return air ducts are arranged in such a way that drying gas blown against the paper web from the profiling chambers is returned into the return air chamber through the return air ducts without the

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drying gas from one profiling chamber affecting the effective area of the adjacent profiling chamber, as now claimed in Claims 1 and 11. This conclusion is further supported by the affidavit of Mr. Jarkko Veijola attached to this response. Mr. Veijola is one of the inventors of the subject matter of the Veijola WO 99/51813 reference, and his affidavit provides several annexes illustrating the subject matter of the Veijola WO 99/51813 reference consistently with such explanation provided herein and further supporting the identified distinctions of the Veijola WO 99/51813 reference with respect to the present invention, as now claimed and as presented in this response. Thus, in view of these differences between the Veijola WO 99/51813 reference and embodiments of the present invention as now claimed in Claims 1 and 11, the Applicants respectfully submit that amended Claims 1 and 11 are not anticipated by the Veijola WO 99/51813 reference. As such, Claims 1, 2, 4, 5, 7-9, 11, 12, 16, 17, and 19-26 are now patentable over the Veijola WO 99/51813 reference.

Claim Rejections – 35 U.S.C. §103

Claims 3, 6, 10, 13-15, 18, and 27 were rejected in the Office Action as being obvious over the Veijola WO 99/51813 reference. In addition, Claims 5-8, 13-15, 17, and 18 were rejected in the Office Action as being obvious over the Pellinen EP 1 143 067 A2 reference and over the Pellinen EP 1 143 067 A2 reference in view of U.S. Patent No. 4,545,857 to Wells.

As previously discussed, the Pellinen EP 1 143 067 A2 reference, published on October 10, 2001, DOES NOT constitute prior art with respect to the present application, which claims priority to Finnish Patent Application No. 20011363, filed June 26, 2001.

Accordingly, the Applicants request withdrawal of the rejections of Claims 5-8, 13-15, 17, and 18 as being obvious over the Pellinen EP 1 143 067 A2 reference and over the Pellinen EP 1 143 067 A2 reference in view of the Wells '857 patent.

As previously discussed, amended Claim 1, upon which Claims 3, 6, and 10 depend, and amended Claim 11, upon which Claims 13-15, 18, and 27 depend, are not anticipated by the Veijola WO 99/51813 reference. Thus, in response, the Applicants further submit that the present invention, as now claimed in Claims 3, 6, 10, 13-15, 18, and 27, is patentable over the

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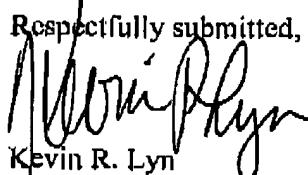
Veijola WO 99/51813 reference. As such, the Applicants respectfully request withdrawal of these rejections.

Conclusion

In summary, the Pellinen EP 1 143 067 A2 reference does not qualify as prior art with respect to the present invention. In addition, Veijola WO 99/51813 reference does not teach, suggest, or provide motivation for the embodiments of the present invention, as now claimed in Claims 1 and 11. Accordingly, in view of these differences between the Applicants' invention and the Veijola WO 99/51813 reference, it is submitted that the present invention, as defined by the pending claims, is patentable over the prior art cited in the Office Action. As such, Claims 1-27 are believed to be in condition for immediate allowance.

In conclusion, for the reasons set forth above, the Applicants submit that all claims now pending are in condition for immediate allowance. Accordingly, notice to such effect is respectfully requested at the Examiner's earliest opportunity.

It is not believed that extensions of time or fees for not addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for not addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,

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